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CELERY.



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CELERY.

W. M. MUNSON.

Celery is a native of Great Britain where in the wild state it grows luxuriantly along wet ditches and in marshes. As a wild plant it has a long tapering root, its taste is acrid and its odor offensive. As a result of cultivation its leaf stalks have become solid, crisp and of an agreeable flavor, while in one variety—celeriace—the roots have become turnip shaped and edible.

Although not grown to an important commercial extent in Maine, the crop is one which may well be grown by every farmer and may in many cases prove a most profitable adjunct of the market garden.

Soil.

The selection of soil in the culture of celery for profit is of great importance. The best soil is a deep black muck with an open, porous subsoil. It is upon such soil—often so soft that the work must be done by hand—that the famous Kalamazoo celery is grown. Soils of this character retain moisture well, are easily worked and are usually in such a location as to permit of controlling the water supply by means of irrigating ditches.

The soil should be at least sixteen or eighteen inches deep and a heavy clay subsoil, unless below the depth mentioned, should be avoided, as it will interfere with satisfactory banking of the crop. The swales or sloughs found on almost every farm, when drained and broken up into a state of fine tilth, make excellent celery land. If a certain amount of sand is mixed with the black soil it is all the better. Throughout the country there are many such swales which are now considered worthless, but which might be made the most profitable part of the farm.

The lack of such soils as above mentioned need not deter any one from growing the crop for home use, for though somewhat

at the mercy of the weather, celery grown in uplands is more solid, keeps longer, and is less liable to suffer from frost than the more succulent growth on black soils, and good results may be expected from any rich garden soil.

In any case, most thorough pulverizing is essential. Celery roots naturally grow near the surface, hence very deep plowing is not necessary, except on uplands where we wish to encourage deeper growth of roots the better to withstand drouth, but the young plants are small and delicate and the whole field should be prepared as for a seed bed.

Fertilisers.

The fact that we grow celery for its leaves, indicates that the plant food supplied should be rich in nitrogen. In most celery growing districts stable manure is preferred if it is obtainable, as the improved mechanical condition of the soil is of importance. From thirty to sixty two-horse loads of well rotted stable manure per acre are applied and at once turned under to a depth of five or six inches.

In case the manure is not well rotted or the supply is limited, some practice making a trench six or eight inches deep where the row is to stand, and, after putting in about three inches of manure, filling with soil before setting the plants.

If the stable manure is not obtainable concentrated fertilizers may be used, if an occasional crop of clover is plowed under to supply humus. Nitrate of soda is especially valuable. Soils which have received large quantities of stable manure are also benefitted by an occasional application of lime or gypsum.

Starting the Plants.

Celery seed is at best uncertain in its germinative power, and unless the conditions are suitable the percentage of germination is usually very low. In general we may count on from 5,000 to 10,000 plants from an ounce of seed.

For early celery the seed is sown in a mild hot bed or in flats in the greenhouse about March 1 to 15. For the home garden, if no hot bed is available, seed may be sown in rich, sandy soil in a shallow box and placed in the kitchen window.

In any case, cover the seed very lightly—not more than one-sixteenth of an inch—and keep the soil moderately moist but not wet. Many practice covering the surface with paper or with boards till the seeds begin to sprout. It is also well to soak the seeds in warm water for a few hours before sowing. There is little doubt that as a rule better results will be obtained in germinating most vegetable seeds if the soil is kept only moderately wet. Seeds must have air as well as moisture in order to germinate.

As the young plants begin to develop, transplant them into rows three inches apart, leaving about a half-inch space between the plants. In case some of the plants become too large before the ground is suitable for setting them in the field, they may be sheared back without harm. The process of "hardening off" should of course be observed. By this we mean that the plants should gradually be made accustomed to lower temperature before removal to the field.

For the main crop the seed is sown out of doors from the middle of April to the first of June. In this case a sheltered location is chosen, a fine seed-bed is prepared and the seed sown broadcast and lightly raked in, or sown thinly in drills and simply rolled. It is then well to provide a screen of lath or brush to protect the young plants and prevent destruction of the seed. If the plants are thinned somewhat in weeding, and are sheared back as they begin to grow too large, transplanting may sometimes be dispensed with, but the plants are better if handled once as described above.

If only a few hundred plants are to be grown, they may be bought cheaper than they can be raised, but if a large number are required the plants should be home grown.

Culture in the Field.

The plants for the main crop will be ready to transfer to the field early in July. They are usually placed six inches apart in rows five feet distant. The old practice of setting the plants in trenches is little followed at the present time.

If the rows are sufficiently far apart, the after culture is best done with a horse, but in no case should deep cultivation be per-

mitted, as the roots extend through all the space between the rows and should not be disturbed. In short, until time of "handling," the culture need not be essentially different from that given to potatoes.

For early use the plants started in March may be transferred to the open ground about the first of June.

Handling.

The old custom of repeatedly "handling" or packing the earth about the growing plants has given way to more expeditious methods and it is generally conceded that one "hilling" before the final banking with earth is sufficient. This hilling should not be done till the plants have thickened considerably, about a month or six weeks before using, as after the earth is drawn about them the leaves grow tall very rapidly without increasing in diameter.

When ready to hill the plants, cultivate deeply between the rows, then draw the soil loosely about the plants with a hoe or a scraper made for that purpose. This operation makes a slight bank, not more than one-third the height of the plant, which straightens the stalks and holds them in an upright position. If the soil is in good condition, it will be unnecessary to pack the earth around individual plants by hand.

Blanching.

Blanching is the first step towards decay, and the exclusion of air and light and the consequent abnormal condition of the tissues render the plants, during this operation, specially liable to disease. For this reason the operation is delayed as long as possible. Plants intended for the first use are generally banked about eight or ten weeks after transplanting.

For bleaching the early crop, the use of boards is preferred to that of earth. The work is done more expeditiously, and there is less trouble from rotting. The method consists simply in placing boards about a foot wide along each side of the row with one edge close to the plants. The men then go along and raise the boards to a vertical position, placing clamps or hooks at intervals to hold them in place. A very good clamp is made

by sawing two notches about an inch wide and three inches apart in a short piece of board. These clamps will then hold the boards perfectly rigid. In ten days or two weeks the celery will be ready for use and the boards are then available for use elsewhere, thus keeping up a succession.

If banking with earth is to be practiced, one of the machines made for that particular purpose will be found of advantage.

Celery intended for winter market is not usually blanched before putting into storage, though it is well to hill it up, to straighten up the leaves and make the plants compact. That intended for late fall use will of course need some attention, as from four to six weeks are required to blanch the later crop. For use before hard freezing occurs, the blanching may be done with boards, but for later use earth is to be preferred.

Storage.

If on well drained soil, the plants may be left in the rows till the last of November, by having some litter at hand to apply in case of hard freezing. It should be remembered, however, that if the plants are well banked, a little freezing of the tips of the leaves will do no harm, and the mistake is often made of applying winter protection too early and thus injuring the crop by keeping it too warm.

For winter storage the method in vogue in some celery-growing districts is to make, on well drained soil, beds of four to six double rows of plants with a wall of dirt between. Bank up on the outside till the tips of the leaves just show above the surface of the bed. Leave the bed in this condition till hard freezing begins, then throw two or three inches of soil over the surface. Let this soil freeze hard before applying litter, and never apply heavy covering at the first approach of cold weather. The soil in the bed is still warm, and if a heavy coat of manure is put on the top, the frost is soon taken out of the surface soil and the temperature will be high enough to induce decay. The secret of success in the winter storage of celery is to keep cool. As the severe weather of winter approaches, the covering of litter may be increased unless there is a fall of snow.

To open the beds, take the litter off from one end, break the crust of soil with a pickaxe, and remove any desired amount of

the celery. Then carefully replace the covering. This plan has the merit of cheapness, and for holding plants through the winter is preferable to storage in a pit or cellar.

If the crop is to be disposed of as early as January, it may be stored in a cool cellar or pit. In this case the plants are set very closely together on loose moist loam. To avoid heating, consequent on packing large quantities of the plants together, compartments, about two feet wide by eight or ten feet long, are made by setting up boards which shall come to the tops of the plants when in place. If the plants are closely packed, so as to exclude the air, it is unnecessary to use earth between them. When plants are stored in this way, it is important that the temperature of the pit or cellar be kept as near the freezing point as possible. If, however, it is desired to hasten the process of blanching, the temperature may be raised. The soil in which the plants are placed should be moist to prevent wilting, but the foliage should always be kept dry or there will be trouble from rotting.

Enemies and Diseases.

There are comparatively few insect enemies of celery, the most important being the "Green Lettuce Worm" and the "Parsley Worm," both of which may be destroyed by the use of kerosene emulsion.

There are several fungous diseases—such as blight, leaf spot, rust, etc.,—which, however, may be held in check by the application of dilute Bordeaux Mixture or the ammoniacal solution of copper carbonate. But in case a crop is seriously injured by one of these diseases it is safer to grow something else on the land the next season, that any spores in the soil may be destroyed.